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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/673,423	02/01/2001	Magnus Danielson	AB-1049 US	8631

32605 7590 12/27/2007
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EXAMINER	
MILLS, DONALD L	

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
12/27/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/673,423	Applicant(s) DANIELSON ET AL.	
	Examiner Donald L. Mills	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 04 October 2007.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-8,10-18,20,21,33,34 and 37-47 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-8,10-18,20,21,33,34 and 37-47 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 10-14, 17, 18, 20, 21, 33, 34, 37-39, 41-44, 46, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm et al. (US 5,982,780), hereinafter referred to as Bohm, in view of Clanton et al. (US 5,734,867), hereinafter referred to as Clanton.

Regarding claims 1, 21, 42, and 46 (respectively), Bohm discloses a resource management scheme and arrangement, which comprises:

Allocating a set of time slots to a circuit-switched first channel (Referring to Figure 1, the bus is divided into 125 us cycles, which in turn are divided into 64-bit time slots. The time slots comprise data slots, which are assigned to channels for utilization. Note: the Examiner interprets the initial allocation of time slots to a channel as a basic level of priority since the time slots are reserved for the associated channel. See column 6, lines 19-37;)

Receiving a request for time slots for a circuit-switched second channel (Referring to Figure 1, a user requests a channel with M slots. See column 6, lines 65-67;)

Determining whether or not to deallocate a subset of said set of time slots from said first channel and allocate the deallocated subset of times slots to said second channel (Referring to Figure 1, the user requests the channel with M slots and sends a request to the closest node with

free slots, based upon the availability of the slots the channel request is granted and the slots are reallocated to the requesting channel. See column 7, lines 1-13. If free slots are not available a response indicating so is transmitted, a request to the second closes node with free slots is requested. See column 7, lines 18.)

Bohm does not disclose *associating multiple levels of priority with channels and utilizing the priority to determine the whether or not to deallocate time slots.*

The main point at issue is the ability to dynamically reassign time slots to different channels based upon requested priority. Bohm teaches allocating time slots to channels and then reallocating any free time slots to users based upon request. When free time slots are not available, the requesting user is notified of the inability to support the additional bandwidth request (See column 7, lines 13-14.) Bohm further teaches that a DTM network allows one to increase or decrease the allocated resources of an existing channel to accommodate different traffic classes (See column 2, lines 29-38), which is the underlying principal of design. In addition, Bohm states that the purpose of the DTM system is to allow for resource allocation/deallocation dynamically as fast as user requirements change (See column 4, lines 29-32.) Clanton addresses the need for tailoring data transmission according to priority by preempting users with lower priority from transmitting, thereby, allowing users with higher priority to transmit. Clanton teaches a method and system for instantaneous preemption of packet data by allowing a higher priority subscriber unit to transmit based upon reassigning time slots to the higher priority subscriber unit over a lower priority subscriber unit (Referring to Figure 5, See column 4, lines 25-30.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claims 2, 5, and 43 as explained in the rejection of claim 1, Bohm and Clanton teach all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *performing deallocation if said second level of priority is higher than said first level of priority.*

The main point at issue is the ability to dynamically reassign time slots to different channels based upon requested priority. Bohm teaches allocating time slots to channels and then reallocating any free time slots to users based upon request. When free time slots are not available, the requesting user is notified of the inability to support the additional bandwidth request (See column 7, lines 13-14.) Bohm further teaches that a DTM network allows one to increase or decrease the allocated resources of an existing channel to accommodate different traffic classes (See column 2, lines 29-38), which is the underlying principal of design. In addition, Bohm states that the purpose of the DTM system is to allow for resource allocation/deallocation dynamically as fast as user requirements change (See column 4, lines 29-32.) Clanton addresses the need for tailoring data transmission according to priority by preempting users with lower priority from transmitting, thereby, allowing users with higher

priority to transmit. Clanton teaches a method and system for instantaneous preemption of packet data by allowing a higher priority subscriber unit to transmit based upon reassigning time slots to the higher priority subscriber unit over a lower priority subscriber unit (Referring to Figure 5, See column 4, lines 25-30.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claims 3 and 44 as explained in the rejection of claims 1 and 42; Bohm and Clanton teach all of the claim limitations of claims 1 and 42 (parent claims).

Bohm does not disclose *second level of priority is identified in said request.*

The main point at issue is the ability to dynamically reassign time slots to different channels based upon requested priority. Bohm teaches allocating time slots to channels and then reallocating any free time slots to users based upon request. When free time slots are not available, the requesting user is notified of the inability to support the additional bandwidth request (See column 7, lines 13-14.) Bohm further teaches that a DTM network allows one to increase or decrease the allocated resources of an existing channel to accommodate different traffic classes (See column 2, lines 29-38), which is the underlying principal of design. In addition, Bohm states that the purpose of the DTM system is to allow for resource

allocation/deallocation dynamically as fast as user requirements change (See column 4, lines 29-32.) Clanton addresses the need for tailoring data transmission according to priority by preempting users with lower priority from transmitting, thereby, allowing users with higher priority to transmit. Clanton teaches a method and system for instantaneous preemption of packet data by allowing a higher priority subscriber unit to transmit based upon reassigning time slots to the higher priority subscriber unit over a lower priority subscriber unit (Referring to Figure 5, See column 4, lines 25-30.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claims 4 and 47 as explained in the rejection of claims 1 and 42; Bohm and Clanton teach all of the claim limitations of claims 1 and 42 (parent claims).

Bohm does not disclose *performing a deallocation if there are insufficient non-allocated time slots available to satisfy said request.*

The main point at issue is the ability to dynamically reassign time slots to different channels based upon requested priority. Bohm teaches allocating time slots to channels and then reallocating any free time slots to users based upon request. When free time slots are not available, the requesting user is notified of the inability to support the additional bandwidth

request (See column 7, lines 13-14.) Bohm further teaches that a DTM network allows one to increase or decrease the allocated resources of an existing channel to accommodate different traffic classes (See column 2, lines 29-38), which is the underlying principal of design. In addition, Bohm states that the purpose of the DTM system is to allow for resource allocation/deallocation dynamically as fast as user requirements change (See column 4, lines 29-32.) Clanton addresses the need for tailoring data transmission according to priority by preempting users with lower priority from transmitting, thereby, allowing users with higher priority to transmit. Clanton teaches a method and system for instantaneous preemption of packet data by allowing a higher priority subscriber unit to transmit based upon reassigning time slots to the higher priority subscriber unit over a lower priority subscriber unit (Referring to Figure 5, See column 4, lines 25-30.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claim 6, the primary reference further teaches *determining whether to deallocate the time slots from the first channel based upon an evaluation regarding to which channel a time slot was last allocated* (Referring to Figure 1, the user requests the channel with M slots and sends a request to the closest node with free slots, based upon the availability of the

slots the channel request is granted and the slots are reallocated to the requesting channel, which comprises evaluating the allocation of the free slots to the previous owner. See column 7, lines 1-13.)

Regarding claim 10, the primary reference further teaches *associating the allocation of all time slots allocated to the first channel with the same level of priority* (Referring to Figure 1, the bus is divided into 125 us cycles, which in turn are divided into 64-bit time slots. The time slots comprise data slots, which are assigned to channels for utilization. Note: the Examiner interprets the initial allocation of time slots to a channel as a basic level of priority since the time slots are reserved for the associated channel. See column 6, lines 19-37.)

Regarding claim 11, the primary reference further teaches *associating the first channel with the first level of priority, resulting in associating the allocation of each time slot allocated to the first channel with the same level of priority* (Referring to Figure 1, the bus is divided into 125 us cycles, which in turn are divided into 64-bit time slots. The time slots comprise data slots, which are assigned to channels for utilization. Note: the Examiner interprets the initial allocation of time slots to a channel as a basic level of priority since the time slots are reserved for the associated channel. See column 6, lines 19-37.)

Regarding claim 12 as explained in the rejection statement of claim 1, Bohm and Clanton teach all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *associating the allocation of different time slots allocated to said first channel with different levels of priority and wherein said determining step comprises to deallocate from the first channel, and allocate to the second channel, only such time slots that*

have been allocated to the first channel with a level of priority that are lower than said second level of priority.

The main point at issue is the ability to dynamically reassign time slots to different channels based upon requested priority. Bohm teaches allocating time slots to channels and then reallocating any free time slots to users based upon request. When free time slots are not available, the requesting user is notified of the inability to support the additional bandwidth request (See column 7, lines 13-14.) Bohm further teaches that a DTM network allows one to increase or decrease the allocated resources of an existing channel to accommodate different traffic classes (See column 2, lines 29-38), which is the underlying principal of design. In addition, Bohm states that the purpose of the DTM system is to allow for resource allocation/deallocation dynamically as fast as user requirements change (See column 4, lines 29-32.) Clanton addresses the need for tailoring data transmission according to priority by preempting users with lower priority from transmitting, thereby, allowing users with higher priority to transmit. Clanton teaches a method and system for instantaneous preemption of packet data by allowing a higher priority subscriber unit to transmit based upon reassigning time slots to the higher priority subscriber unit over a lower priority subscriber unit (Referring to Figure 5, See column 4, lines 25-30.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources

are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claim 13 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *associating the allocation of time slots allocated to the channel over a first portion of the network with one level of priority and associating the allocation of time slots allocated to the first channel over another portion of the network with another selected level of priority.*

The main point at issue is the ability to dynamically reassign time slots to different channels based upon requested priority. Bohm teaches allocating time slots to channels and then reallocating any free time slots to users based upon request. When free time slots are not available, the requesting user is notified of the inability to support the additional bandwidth request (See column 7, lines 13-14.) Bohm further teaches that a DTM network allows one to increase or decrease the allocated resources of an existing channel to accommodate different traffic classes (See column 2, lines 29-38), which is the underlying principal of design. In addition, Bohm states that the purpose of the DTM system is to allow for resource allocation/deallocation dynamically as fast as user requirements change (See column 4, lines 29-32.) Clanton addresses the need for tailoring data transmission according to priority by preempting users with lower priority from transmitting, thereby, allowing users with higher priority to transmit. Clanton teaches a method and system for instantaneous preemption of packet data by allowing a higher priority subscriber unit to transmit based upon reassigning time

slots to the higher priority subscriber unit over a lower priority subscriber unit (Referring to Figure 5, See column 4, lines 25-30.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claim 14, the primary reference further teaches *changing the level of priority associated with the allocation of time slots to the channel as a consequence of changing bandwidth requirements* (Referring to Figure 3, the channel state of the time slot comprises a priority status for indicating a present priority level for a time slot, inherently changed to represent the present level of priority, comprising a packet channel type which identifies a busy-idle state. See column 4, lines 33-34.)

Regarding claim 17 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *selecting the levels of priority based upon the identity of a physical or virtual port or interface to/from which traffic pertaining to the respective channel is delivered.*

Clanton teaches the channel state of the time slot comprises a priority status for indicating a present priority level for a time slot, inherently based upon the air interface (See column 4, lines 33-34.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claim 18 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *selecting the levels of priority based upon an identification of the type of application that traffic to be transported in the respective channel pertains to.*

Clanton teaches the channel state of the time slot comprises a priority status for indicating a present priority level for a time slot, utilized for establishing high priority for instantaneous transmission of short messages and short packets instantaneously (See column 4, lines 33-34.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources

are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claim 20 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *transmitting information on the level of priority associated with the allocation time slots to a channel to one or more other nodes of the network in order for the other node or nodes to be able to switch the channel taking the level of priority into consideration.*

Clanton teaches subscriber unit A transmits on the corresponding uplink time slot, then the subscriber unit C with higher priority, transmits on the time slot (See column 3, lines 26-30.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claims 33 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *specifying different traffic service classes based upon said priority levels when operating a communication network.*

Clanton teaches the channel state of the time slot comprises a priority status for indicating a present priority level for a time slot, utilized for establishing high priority for instantaneous transmission of short messages and short packets instantaneously (See column 4, lines 33-34.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claim 34 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *providing channel prioritization based upon said priority levels when interconnecting ports of a data switching or routing apparatus.*

Clanton teaches the channel state includes a channel type and the priority level of the time slot, for connecting ports of the central access manager (See column 2, lines 64-65.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system

resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

Regarding claims 37-39 the primary reference further teaches *wherein said method is performed at a node of the network and wherein the request is received from another node of the network* (Referring to Figure 1, a user requests a channel with M slots from a node. See column 6, lines 65-67.)

Regarding claim 41 as explained in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *defining the level of priority for the allocation of time slots to one or more of said channels so that a higher level of priority is assigned for allocation of time slots to channels carrying traffic pertaining to real-time applications, such as voice or video applications, whereas a lower level of priority is assigned for allocation of time slots to channels carrying bursty data traffic.*

Clanton teaches allowing users to transmit on the uplink channel based upon ownership of the timeslot based upon a higher priority (See column 3, lines 13-16.) Clanton teaches allowing a higher priority subscriber unit to transmit based upon assigning the time slot to the higher priority subscriber unit over the channel (See column 4, lines 25-30.) Bohm teaches allocating time slots to channels and then reallocating any free time slots to users based upon request. When free time slots are not available, the requesting user is notified of the inability to support the additional bandwidth request (See column 7, lines 13-14.) Bohm further teaches that a DTM network allows one to increase or decrease the allocated resources of an existing channel to accommodate different traffic classes (See column 2, lines 29-38), which is the underlying

principal of design. In addition, Bohm states that the purpose of the DTM system is to allow for resource allocation/deallocation dynamically as fast as user requirements change (See column 4, lines 29-32.) Clanton addresses the need for tailoring data transmission according to priority by preempting users with lower priority from transmitting, thereby, allowing users with higher priority to transmit. Clanton teaches allowing users to transmit on the uplink channel based upon ownership of the timeslot based upon a higher priority (See column 3, lines 13-16.) Clanton teaches allowing a higher priority subscriber unit to transmit based upon assigning the time slot to the higher priority subscriber unit over the channel (See column 4, lines 25-30.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the priority based transmission control of Clanton in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allowing dynamic resource allocation/deallocation during periods in which free-slots are unavailable but system resources are necessary to support a high level traffic class based upon a user's priority as taught by Bohm (See column 4, lines 29-32.)

3. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm (US 5,982,780) in view of Clanton (US 5,734,867) in further in view of Chan (US 5,790,551).

Regarding claim 7 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *deallocating time slots from the first channel based upon an evaluation regarding to which channel a time slot has been allocated the longest period of time.*

Chan teaches sending a request for assignment of a channel for transmission of data, comprising a particular frequency/time slot, and the network responds with the identification of a particular channel, after reviewing all time slots including those that may have been previously allocated for extended periods of time, that may be used for a particular time period to transmit data (See column 1, lines 61-66.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the time slot allocation of Chan in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to improve the system efficiency of the DTM system by allocating idle free time slots (See column 4, lines 29-32.)

Regarding claim 8 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *deallocating the time slots from the first channel based upon an evaluation regarding from which channel a time slot was last deallocated.*

Chan teaches sending a request for assignment of a channel for transmission of data, comprising a particular frequency/time slot, and the network responds with the identification of a particular channel, after reviewing all time slots including those that may have been previously deallocated, that may be used for a particular time period to transmit data (See column 1, lines 61-66.)

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the time slot allocation of Chan in the DTM system of Bohm. One of ordinary skill in the art at the time of the invention would have been motivated to do so in order to

improve the system efficiency of the DTM system by allocating idle free time slots (See column 4, lines 29-32.)

4. Claims 15, 16, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohm (US 5,982,780) in view of Clanton (US 5,734,867) in further view of Kusano et al. (US 5,933,422), hereinafter referred to as Kusano.

Regarding claims 15 and 40 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *determining the priority by which the channels are to be re-established in case of channel failure based upon their respective levels of priority.*

Kusano teaches a communication network recoverable from link failure using prioritized recovery classes comprising a path management table **80** where virtual paths comprises a fault recovery class with three levels of priority indicating which paths are to be recovered (See column 3, lines 24-28.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the prioritized fault recovery method of Kusano in the system of Bohm. One of ordinary skill in the art would have been motivated to do so in order to guarantee necessary bandwidth for continued operation in the event of a failure during the transmission of a message or packet in system comprising multiple uplink and downlink channels as taught by Kusano (See column 3, lines 24-28.)

Regarding claim 16 as explained above in the rejection statement of claim 1, Bohm and Clanton disclose all of the claim limitations of claim 1 (parent claim).

Bohm does not disclose *determining a degree of redundancy requested for the channels based upon their respective levels of priority.*

Kusano teaches a communication network recoverable from link failure using prioritized recovery classes comprising a path management table **80** where virtual paths comprises a fault recovery class with three levels of priority indicating which paths are to be recovered (See column 3, lines 24-28.)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the prioritized fault recovery method of Kusano in the system of Bohm. One of ordinary skill in the art would have been motivated to do so in order to guarantee necessary bandwidth for continued operation in the event of a failure during the transmission of a message or packet in system comprising multiple uplink and downlink channels as taught by Kusano (See column 3, lines 24-28.)

Response to Arguments

5. Applicant's arguments filed 04 October 2007 have been fully considered but they are not persuasive.

Rejection Under 35 USC 103

On pages 3 and 4 of the brief, regarding claims 1, 21, and 42, the Applicant argues that Clanton is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this

case, the main point at issue is the ability to dynamically reassign time slots to different channels based upon requested priority. Bohm teaches allocating time slots to channels and then reallocating any free time slots to users based upon request. When free time slots are not available, the requesting user is notified of the inability to support the additional bandwidth request (See column 7, lines 13-14.) Bohm further teaches that a DTM network allows one to increase or decrease the allocated resources of an existing channel to accommodate different traffic classes (See column 2, lines 29-38), which is the underlying principal of design. In addition, Bohm states that the purpose of the DTM system is to allow for resource allocation/deallocation dynamically as fast as user requirements change (See column 4, lines 29-32.) Clanton addresses the need for tailoring data transmission according to priority by preempting users with lower priority from transmitting, thereby, allowing users with higher priority to transmit. Clanton teaches a method and system for instantaneous preemption of packet data by allowing a higher priority subscriber unit to transmit based upon reassigning time slots to the higher priority subscriber unit over a lower priority subscriber unit (Referring to Figure 5, See column 4, lines 25-30.) Also, in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

On page 4 of the remarks, regarding claims 1, 21, and 42, the Applicant argues Clanton does not disclose *a set of time slots to a circuit switched first channel.* The Examiner respectfully disagrees. The claim is interpreted in a broad literal reasonable sense. The Examiner interprets the claims as applying a time slot in a serial fashion (set of time slots) to a channel. Should the Applicant infer a different meaning to the term "set of time slots" and "channel," the Applicant is encouraged to amend the claims to reflect such an implication.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Donald L. Mills whose telephone number is 571-272-3094. The examiner can normally be reached on 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Donald L Mills/

December 19, 2007

CHI PHAM
SUPERVISORY PATENT EXAMINER
12/26/07